iMars XG3-15KTR1-S

Quick Installation Guide

INVT Solar Technology (Shenzhen) Co., Ltd.

	● Only qualified electricians are allowed to install the inverter. ● Do not store and install the inverter close to combustible materials. ● Install the inverter away from electronic devices with strong electromagnetic interference. ● Keep the installation site away from places frequently visited by children and other public. ● Remove the metal jewelry such as ring and bracelet before you perform installation and electrical connection, in order to avoid electric shock. ● The input voltage to the inverter should not exceed 600V; otherwise, the inverter may be damaged. ● The inverter is not compatible with the positive or negative grounding system of solar cell module. ● Make sure the PE of the inverter is reliably grounded. ● Ensure reliable installation and electrical connection. ● PV grid-tied inverter have LCD and LED versions, the installation methods of the two versions are the same.

❶ Unpacking inspection

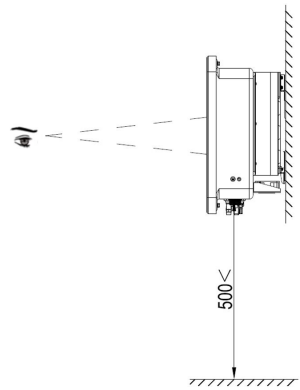
Inspect the information of the order and the name plate to ensure the product are the ordered one and no damage to the package. If any problem, contact the supplier as soon as possible.

Table 1 Packing list of three-phase PV inverters.

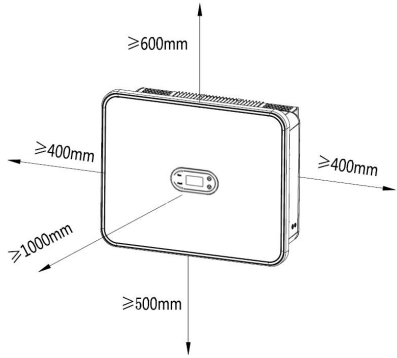
No.	Name	Qty
1	PV Inverter	1
2	PV connector (Pair)	2
3	Quick installation guide	1
4	Install the hanger	1
5	M6*50 expansion bolt	4
6	M6*16 bolt assembly	4
7	A2-70 flange nut	4
8	M6 stainless steel flat pad	4
9	AC quick connect plug	1
10	Communication Cable (not included in AU （Optional）)	1
11	GPRS Module（Optional）	1
12	WIFI Module（Optional）	1

❷Installation distance and location

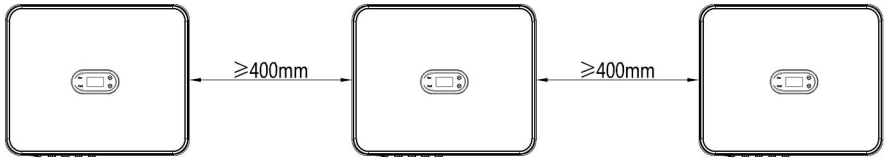
(1) The installation position height shall ensure that the line of sight is on the same horizontal plane as the LED display lamp, this is easy for people to inspect the inverter status.



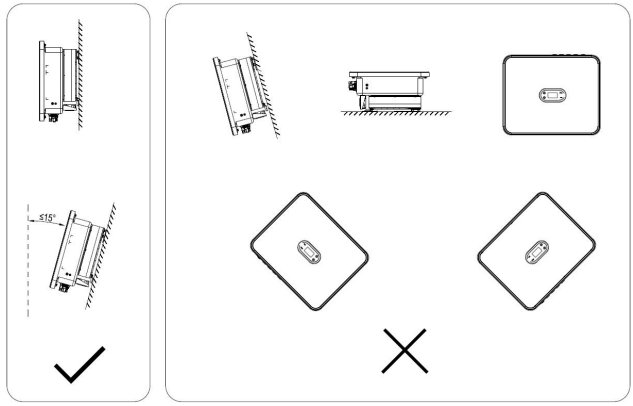
(2) There is enough reserved space around the installation site to facilitate the disassembly and assembly of the inverter and air convection.



(3) When installing multiple inverters, it is necessary to reserve a certain space between the inverters, the left and right space is as follows, and at the same time, the upper and lower parts of the inverter need to leave a sufficient distance in order to ensure that it dissipates heat well.

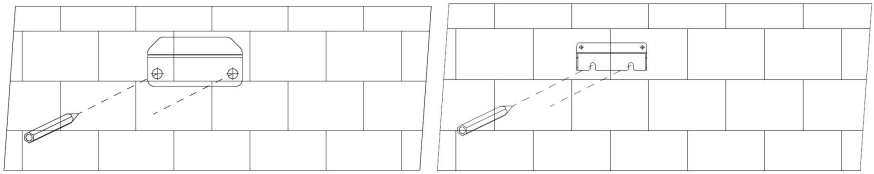


(4) The mounting surface should be perpendicular to the horizontal line as shown in the figure below. Please install the inverter vertically or tilted back ≤15° to facilitate the heat dissipation of the machine. Do not tilt the inverter forward, horizontally, upside down, lean back too much, or install it sideways.

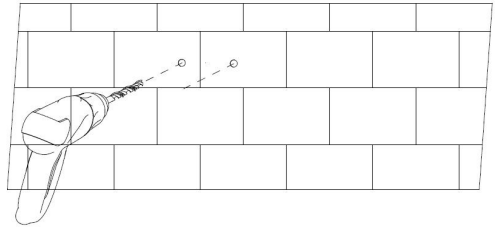


❸Inverter installation

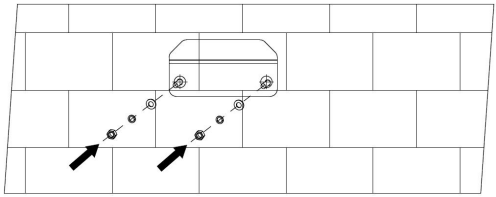
(1) Place the hanging plate at the wall installation point, adjust the angle with a horizontal ruler, and mark with a marker pen



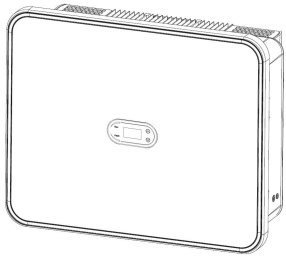
(2) Punch holes with a impact drill and install expansion bolts. The user needs to prepare the expansion bolt by himself, and it is recommended to use M8 × 60 stainless steel explosion expansion bolt.



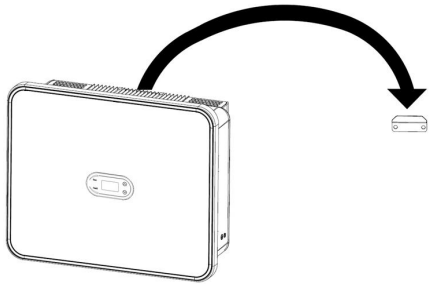
(3) Fixed hanging plate. Clean the hole, impact the expansion bolt into the hole with a rubber hammer, use a wrench to tighten the nut to fix the tail of the bolt, then remove the nut, spring pad and flat pad, and then lock the wall hanging plate fixation to the wall surface, with the tightening torque of 13N • m.



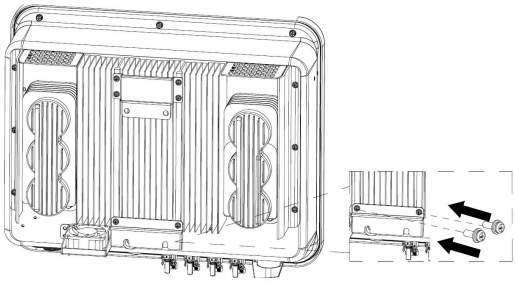
(4)Take out the inverter from the packaging box. If the installation position is high, transport the inverter to the destination while ensuring safety.



(5)After lifting the inverter, fasten the back bracket plate of the inverter into the wall hanging plate, and ensure that the inverter bracket plate is well matched with the hanging plate groove.



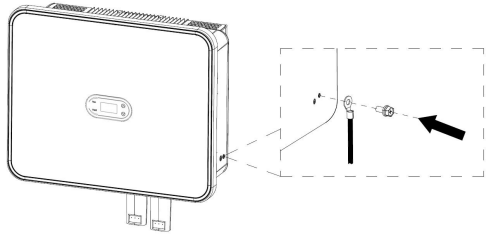
(6)After the inverter is stably hung on the wall mount, fix the bottom screws.



4 Electrical connection

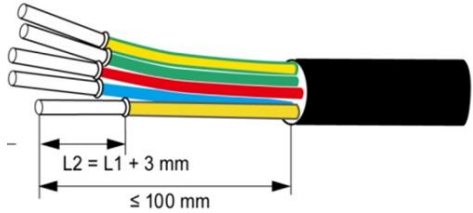
4.1 Connect the protection ground wire

Crimp OT terminal to ground. Remove the screw in the ground position on the side of the chassis, fasten the ground wire by the screw, and the tighten torque is 7-9N • m.

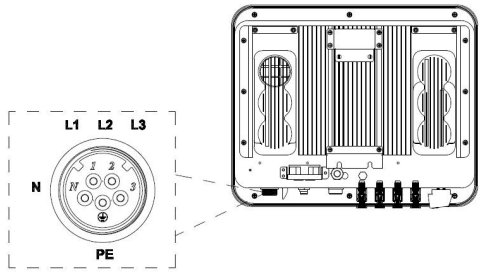


4.2 Grid terminal connection

(1) Connect the four wires L1, L2, L3, and N of the three-phase public power grid to the AC terminal, connect the ground wire to the grounding point outside the chassis, and ensure that the conductors of the wires are not exposed and crimped firmly.



(2) Tighten L1, L2, L3, and N of the crimped terminals with a torque of 7-9N•m, and the grounding torque of PE on the outside of the chassis is 7-9N•m; then tighten the AC waterproof cap.



4.3 PV Wiring

(1) Connect the outgoing cable of the PV panel to the MC4 terminal delivered with the inverter

(2) Check the polarity of the PV strings, and then connect it to the inverter.

4.4 Communication connection

(1) 485 pin definition

1 (red)	+ 5VDC
2 (Orange)	A (RS 485 +)
3 (brown)	B (RS 485-)
4 (Black)	GND

(2) Communication options

Communication Option	Inverter interface	Upper computer interface
Ethernet Converter	RS 485-1	RJ45 Plug
WiFi Converter	RS 485-1	Wireless WiFi Signal
GPRS Converter	RS 485-1	Wireless GPRS Signal
ENET Converter	RS 485-1	Network port

5 Check before operation

(1) Turn on the AC side circuit breaker of the grid;

(2) Turn on the DC switch of the inverter;

(3) Turn on the switch on the DC input side of the PV string;

(4) Observe the status of the inverter's LED lights or the information displayed on the LCD screen

(5) Wait for the inverter to connect to the grid successfully.

Regular maintenance

When power failure maintenance, overhaul, troubleshooting of the inverter is required, please stop the inverter strictly as follows:

(1) Switch off the breakers at the AC side;

(2) Switch off the integrated DC switch;

(3) Contact with customer service staff or local dealers.

More information
For complete instruction of relevant parameters, please refer to Operation Manual of INVT iMars Series PV Grid-tied Inverters. You can visit www.invt.com or scan QR code to download. Service line: +86 400 700 9997

INVT Solar Technology (Shenzhen) Co., Ltd.

Certificate of Quality

Quality Inspector： 

The product is tested by our quality control and quality assurance department, is in line with the product standards and specified technical requirements and is ready to be shipped.

Warranty Card

Customer Name：	
Customer Address：	
Contact Person：	Tel/Phone：
Product Model Number：	Factory Serial Number：
Purchase Date：	Fault Date：
Open Circuit Voltage (Voc) / DC Input Power (W):	Grid Rated Voltage / Frequency :

Setup Model	Noise ?	Smoke ?
☐ Independent ☐ Parallel	☐ YES ☐ NO	☐ YES ☐ NO

Inverter Software Version: Version 1_____; Version 2_____

MCU Version:

Error Code:

Error Description:

Please return this card with information to us. Thank you!

All rights reserved by INVT counterfeiting must be prosecuted.
Information may be subject to change without notice during product improving

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